

INTERNATIONAL SEARCH REPORT

 Internati Application No
 US 03/25660

 A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H05K9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H05K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | EP 0 810 452 A (MITSUI TOATSU CHEMICALS) 3 December 1997 (1997-12-03) cited in the application page 1, line 3-8 page 4, line 20,21 page 5, line 5-47 page 10, line 24-40 page 11, line 20-26; figures 2,3 ---- | 1, 15, 29 |
| A | EP 0 977 167 A (SUMITOMO CHEMICAL CO) 2 February 2000 (2000-02-02) page 8, line 10-34 ---- | 1, 15, 29 |
| A | EP 0 944 299 A (LINTEC CORP) 22 September 1999 (1999-09-22) figure 1; example 1 ----- -/-- | 1, 15, 29 |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

16 December 2003

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23/12/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| A | <p>US 4 910 090 A (KUHLMAN BRUCE E ET AL) 20 March 1990 (1990-03-20) cited in the application page 2, line 64 -page 3, line 8; figure 2 -----</p> | 1,15,29 |

INTERNATIONAL SEARCH REPORT

nation on patent family members

Internat. I Application No

US 03/25660

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|----------------------------|---------------------|
| EP 0810452 | A | 03-12-1997 | EP 0810452 A2 | 03-12-1997 |
| | | | JP 3004271 B2 | 31-01-2000 |
| | | | JP 2000031687 A | 28-01-2000 |
| | | | JP 3004222 B2 | 31-01-2000 |
| | | | JP 10217380 A | 18-08-1998 |
| | | | KR 215589 B1 | 16-08-1999 |
| | | | SG 50834 A1 | 21-09-1999 |
| | | | TW 446637 B | 21-07-2001 |
| | | | US 6104530 A | 15-08-2000 |
| EP 0977167 | A | 02-02-2000 | EP 0977167 A1 | 02-02-2000 |
| | | | US 6417619 B1 | 09-07-2002 |
| | | | WO 9845828 A1 | 15-10-1998 |
| | | | JP 11103192 A | 13-04-1999 |
| | | | TW 417025 B | 01-01-2001 |
| EP 0944299 | A | 22-09-1999 | JP 11274791 A | 08-10-1999 |
| | | | EP 0944299 A2 | 22-09-1999 |
| | | | US 6495752 B1 | 17-12-2002 |
| US 4910090 | A | 20-03-1990 | AU 2721288 A | 23-05-1989 |
| | | | CA 1303713 C | 16-06-1992 |
| | | | EP 0383825 A1 | 29-08-1990 |
| | | | JP 3503221 T | 18-07-1991 |
| | | | WO 8904099 A1 | 05-05-1989 |